

#### 4.3.5.1 Mixed Oxide Fuel Fabrication Facility

The environmental impacts described in the following sections are based on the analysis of the MOX fuel fabrication facility for the Reactor Category of Alternatives and is described in Section 2.4.5.1. The representative sites used for this facility are: Hanford, NTS, INEL, Pantex, ORR, and SRS. Environmental impacts for a representative commercial facility are also described in the context of a generic range of conditions that could exist at potential locations.

In accordance with the Preferred Alternative for surplus Pu disposition, the MOX fuel fabrication facility could be located at either Hanford, INEL, Pantex, or SRS. As a result of implementing a multiple technology disposition strategy, for analysis purposes, approximately 70 percent of the surplus Pu would be fabricated into MOX fuel. Further tiered NEPA review will be conducted to examine alternative locations, including new and existing facilities, at these four sites should the Preferred Alternative be selected at the ROD.

##### 4.3.5.1.1 Land Resources

The MOX fuel fabrication facility may be located at Hanford, NTS, INEL, Pantex, ORR, SRS, or a commercial MOX fuel fabrication site. At all sites, the MOX fuel fabrication facility would disturb 121 ha (300 acres) of land during construction of which 81 ha (200 acres) would be used during operations. At any of these sites, the MOX fuel fabrication facility would be a stand-alone operation. The facility would be sited in a 1.6-km (1-mi) buffer zone for a total land area of 890 ha (2,200 acres). The buffer zone would be contained within the boundary of all analysis sites except at ORR, where the buffer zone would be less than 1.6 km (1 mi).

Construction and operation of the MOX fuel fabrication facility would not cause indirect land-use impacts at the analysis sites. As discussed in Section 4.3.5.1.8, in-migration of workers would be required at INEL only during the construction phase and at all analysis sites except ORR during the operational phase. Historic housing construction rates indicate that there would be sufficient housing units available to accommodate the in-migrating population at each site. Therefore, offsite land use at the representative sites would not be affected.

##### *Hanford Site*

**Land Use.** The potential site for the MOX fuel fabrication facility would utilize vacant land in the 200 Area adjacent to 200 East. Construction of the MOX fuel fabrication facility would be in conformance with existing and future land use as described in the current *Hanford Site Development Plan* and with ongoing discussions in the comprehensive land use planning process. According to the *Hanford Site Development Plan*, 200 Area's land use is identified as waste operations, which includes radioactive material management, processing, and storage (HF DOE 1993c:13,14). [Text deleted.]

Construction and operations would not affect other Hanford or offsite land uses. No prime farmlands exist onsite. The proposal would be consistent with State and local (Benton, Franklin, and Grant Counties and the City of Richland) land-use plans, policies, and controls since Hanford provides information to these jurisdictions for use in their efforts to comply with the GMA (HF DOE 1993c:17).

**Visual Resources.** [Text deleted.] Construction would be consistent with the industrialized landscape character of the 200 Area and Hanford VRM Class 5 designation of the potential site. A potential visual impact during operation would be from the new stack plumes which could be visible from viewpoints with high sensitivity levels, including State Highways 24 and 240 and the city of Richland; however, because of viewing distance and compatibility of the proposal with existing industrial character, visual impacts would not occur.

### ***Nevada Test Site***

**Land Use.** The potential location for the MOX fuel fabrication facility would be on undeveloped land in Area 6 adjacent to the DAF. Construction and operation of the facility in Area 6 would not be in conformance with the current *Nevada Test Site Development Plan*, which designates the southeast area of NTS as nonnuclear test area. However, Area 6 is a potential site for long-term storage and disposition of weapons-usable fissile materials as part of the NTS defense program material disposition activities considered under the Expanded Use Alternative (part of the Preferred Alternative) of the NTS EIS (NT DOE 1996c:3-8,3-9; NT DOE 1996e:A-18). [Text deleted.]

Construction and operation would not affect other NTS or offsite land uses. No prime farmlands exist onsite. The alternative would not be in conflict with land-use plans, policies, and controls of adjacent jurisdictions since none of these counties or municipalities currently undertake land-use planning.

**Visual Resources.** [Text deleted.] Construction and operation of the facility would be compatible with the industrial landscape character of the adjacent DAF and the current VRM Class 5 designation of Area 6. Views of the proposed action would be blocked from sensitive viewpoints accessible to the public by mountainous terrain.

### ***Idaho National Engineering Laboratory***

**Land Use.** The MOX fuel fabrication facility would be located in or adjacent to the ICPP security area. New construction would be required. Construction and operation of the facility would be in conformance with the current *Idaho National Engineering Laboratory Site Development Plan*, which designates the ICPP as situated within the central core area/Prime Development Land Zone of INEL (IN DOE 1992g:12). [Text deleted.]

Construction would not affect other INEL or offsite land uses. No prime farmlands exist onsite. Construction would not be in conflict with local land-use plans, policies, and controls of adjacent counties and the city of Idaho Falls since they do not address the potential site.

**Visual Resources.** [Text deleted.] Construction and operation would be compatible with the present visual character of INEL, which consists of large industrial facilities and stack plumes. Potential visual impacts could occur from the additional stack plumes; however, the proposal would be consistent with the existing VRM Class 5 industrial landscape character of the ICPP.

### ***Pantex Plant***

**Land Use.** The MOX fuel fabrication facility would be located on undeveloped land in Zone 11. The master plan of the current *Pantex Site Development Plan* designates Zone 11 for applied technology (PX DOE 1995g:16). However, Pantex could revise the site development plan should DOE decide to construct a MOX fuel fabrication facility in Zone 11.

Construction would not affect other site land uses. As discussed in Section 3.5.1, there would be no onsite impacts to prime farmland. The alternative would not be in conflict with the city of Amarillo's land-use plans, policies, and controls since they do not address Pantex.

**Visual Resources.** [Text deleted.] Potential impacts could occur during operations from the additional stack plumes; however, the visual environment would be consistent with the industrialized landscape character and current VRM Class 5 designation of Zone 11.

### ***Oak Ridge Reservation***

**Land Use.** The MOX fuel fabrication facility would be located on undeveloped land at or adjacent to Y-12. Weapons component manufacturing and development is among the future land uses designated for Y-12 by the future land-use plan of the current *Oak Ridge Reservation Site Development and Facilities Utilization Plan* (OR DOE 1989a:5-6,5-7). However, ORR could revise the site development plan should DOE decide to construct the facility at ORR.

The MOX fuel fabrication facility would not affect other ORR or offsite land uses. No prime farmlands exist onsite. The alternative would not be in conflict with city of Oak Ridge land-use plans, policies, and controls since the *Oak Ridge Area Land Use Plan* designates the potential site for industrial and/or Public use (depending upon the exact location chosen).

**Visual Resources.** [Text deleted.] Potential visual impacts could occur during operation from the new stack plumes; however, the visual environment would be consistent with the industrialized landscape character and existing VRM Class 5 designation of Y-12.

### ***Savannah River Site***

**Land Use.** The MOX fuel fabrication facility would be located on undeveloped land approximately 1.6 km (1 mi) north of the P-Reactor Area on the east side of SRS Route F. Facility construction and operation would be in conformance with future land use as designated by the current *Savannah River Site Development Plan*. According to the Plan, the future land-use category for the proposed development site is primary industrial mission (SR DOE 1994d:11,12). However, construction of the facility would convert undeveloped, forested land, and a very small portion of NERP lands.

Construction would not affect other SRS or offsite land uses at SRS. There are no prime farmland on SRS. Construction and operation would not be in conflict with the land-use plans, policies, and controls of adjacent counties and cities since they do not address SRS.

**Visual Resources.** [Text deleted.] Construction and operation of the facility would change the current VRM Class 4 designation to Class 5. Potential visual impacts could occur during operation from additional stack plumes. However, because of hilly terrain, impacts to State Highway 125 and SRS Route 1 would not occur.

### ***Generic Site***

**Land Use.** The site chosen for the commercial facility would likely contain adequate land area to accommodate MOX fuel fabrication facility and surrounding undeveloped land area. Construction of the facility could change existing land use. It is anticipated that the facility would be in conformance with site development/facility utilizations plans as well as land use plans, policies, and controls at the Federal, State, and local levels. If site development is not in conformance, it could be possible for land use plans, policies, and controls to be revised. Revisions could include a change in zoning classification of the site. The use of special status lands and prime farmland could be affected.

**Visual Resources.** It is anticipated that the facility would be relatively visually unobtrusive to adjacent lands due to sensitive site design, earthwork, and landscaping. However, the existing VRM classification could change due to facility construction and operations. It is likely that the existing VRM classification would be Class 4 or 5. Visual impacts to adjacent lands with high sensitivity levels, such as public roads, residential areas, and recreational/scenic areas could be reduced by the 1.6-km (1-mi) buffer zone.

[Text deleted.]